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## Questions and Answers on Feeding Hens for Egg Production



The University of Nebraska Agricultural College Extension Service  
and United States Department of Agriculture Cooperating  
W. H. Brokaw, Director, Lincoln

## **Questions and Answers on Feeding Hens for Egg Production**

BY J. R. REDDITT

1. **How much feed will 100 hens use per day?**  
A. Leghorns approximately 10 pounds of grain and 10 pounds of mash. Heavy breeds, approximately 12 pounds of each.
2. **If hens fail to consume this amount of mash what are the reasons?**  
A. (1) The flock may be sick. (2) Too much scratch grain may have been provided. (3) Mash hoppers may be dark. (4) There may not be enough hoppers. (5) Water supply or drinking space may be inadequate.
3. **Why is mash fed to hens?**  
A. The important function of mash is as a carrier to supply hens with protein. Mash provides a digestible grain substance with which to add protein concentrate such as meat meal and dried buttermilk. Ground feeds are also more quickly digested, assimilated, and used by the hens.
4. **Why are animal proteins preferred to vegetable proteins such as linseed, soy bean, and cottonseed meal?**  
A. Vegetable proteins do not contain or break up into the necessary amino acids required for digesting and utilizing feeds. Some are quite laxative in effect and some are said to affect egg quality.
5. **What animal proteins are recommended?**  
A. Meat and bone meal and dried or fresh buttermilk or skim milk. These are available in Nebraska at lower costs than fish meal or other such products.
6. **Are both meat and bone meal and milk recommended?**  
A. Yes. Apparently the variety is beneficial. About 5% dried buttermilk is added to 15% of meat and bone meal.
7. **How can fresh buttermilk produced on the farm be most economically and beneficially fed to the hens?**  
A. Reduce the meat and bone meal one-half and give the milk to the hens in liquid form from sanitary, protected, and daily scalded containers.
8. **How much meat meal does a hen use in one year?**  
A. About six pounds.
9. **What minerals do chickens need and in what amounts?**  
A. Chiefly lime for egg shell and bone and phosphorous for bone. Small quantities of all other mineral elements required by the bird's system are amply supplied in the home grown grains. Oyster shell kept before the fowls at all times and bone of the meat and bone meal supply all of the lime and phosphorous hens need.
10. **Why is salt fed to hens?**  
A. About one pound of salt to each 100 pounds of mash adds to the palatability of the ration, aids digestion, and increases water consumption necessary for health and egg production.
11. **What is the value of cod liver oil in feeding hens?**  
A. Cod liver oil prevents rickets. It is the richest known source



of vitamin D. Cod liver oil supplements vitamin D when hens are confined. It increases weight, improves texture and strength of shells, and increases hatchability of eggs.

**12. Why are germinated oats and alfalfa meal recommended?**

A. Germinated oats are a suitable substitute for succulent green feed. They add variety and bulk to the feed. Alfalfa supplies vitamin A factor, essential minerals, acts as a laxative, and is a substitute for green feed.

**13. Is it advisable to mix and use home grown feeds or buy prepared feed?**

A. Whether to buy ready mixed feeds or mix rations at home is a question of cost, quality, and convenience. Figure the cost of the ingredients in the ration, plus five to ten cents per hundred for mixing, and then compare the price of home mixed feeds with ready mixed feeds.

**14. What is the difference in the feeding of a market egg flock and a hatching egg flock?**

A. Fundamentally, there is no difference. Market egg flocks, however, are usually fed and forced for high production during the winter. Eggs from such flocks are usually less desirable for hatching.

**15. What is meant by a balanced ration or a complete ration for poultry?**

A. The term "balanced" has reference to the ratio or proportion of proteins to carbohydrates in the feed. It is a misleading term that can well be replaced with "complete" rations, meaning feeds containing in right amounts all the essential nutritional ingredients the body requires and in a form readily digested and assimilated.

**16. What protein level is recommended for laying mashers?**

A. That will depend upon the amount of grain fed. The protein level of the whole ration, not including green feed should be about 16 per cent. Grains average about 11 per cent protein. If equal parts of grain and mash are fed, the protein level of the mash should be at least 20 per cent. When skim milk is fed it should be reduced to 17 per cent.

**17. Is ground whole wheat as satisfactory for poultry as bran and shorts?**

A. No. Bran and shorts are richer in minerals and protein than whole wheat. Wheat is doughy, it causes compaction and constipation to a greater degree than bran or shorts. It is a more satisfactory substitute for shorts than for bran.

**18. What is the relative feeding value of light and heavy oats for poultry feed?**

A. Repeated and carefully conducted tests at the University of Nebraska Poultry Farm show the feed value of light oats (24 lbs. per bushel) equal in every respect to heavy oats (34 lbs. per bushel.)

**19. How does finely ground whole oats compare with rolled oats and oat groats (ground hulled oats)?**

A. Nebraska tests favor finely ground whole oats over oatmeal or oat groats in growth rates and feed costs.

**20. What is the advantage of soaked over dry oats for poultry?**

A. Palatability. Chickens seem to prefer soaked oats.

21. **What ill effects may result in overfeeding of green feeds? Of under consumption of green feeds?**
  - A. Heavy feeding of well liked green feeds reduces mash consumption and thus reduces egg production. Eggs with thin watery whites often result from heavy feeding of greens. Green feeds supply needed vitamins and furnish roughage.
22. **What are results of overfeeding of grains and under consumption of mash?**
  - A. Hens decrease their rate of production quickly and put on extra fat when an increased amount of grain is fed above the optimum amount.
23. **What available feeds contain the ricket preventing qualities of cod liver oil?**
  - A. Recent tests have shown that sardine oil and cod liver oil stearene (a by-product of the manufacture of cod liver oil) carry vitamin D qualities. Egg yolk is a rich source of vitamin D.
24. **How many pounds of cut green feed can be safely fed daily to 100 hens?**
  - A. About five pounds of green feeds per day per 100 hens are recommended as ample by California egg producers.
25. **Why is whole corn rather than cracked corn recommended as scratch grain for hens?**
  - A. Whole corn is cheaper to feed because grinding costs are eliminated and some waste prevented. Whole corn is easier to store without mold forming than cracked corn.
26. **What constitutes forced feeding for heavy egg production?**
  - A. Increased consumption of laying mash by: (1) giving hens a long working day, (2) feeding moist mash, milk or cottage cheese, (3) stirring blood meal semi-solid buttermilk or cottage cheese into the germinated oats.
27. **What effect does new grain have on poultry?**
  - A. New grain at times seems to upset the digestive system and thus proves harmful.
28. **Give the formula of a simple laying mash mixture.**

A. Ground yellow corn.....	360 lbs..
Shorts or ground wheat.....	200
Wheat bran .....	100
Finely ground oats or barley.....	100
Meat meal.....	150
Alfalfa meal.....	80
Salt .....	10
	<hr/>
	1000 lbs.